

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/002651

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 F41H 11/16**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F41H11/16, 11/08, 11/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
KR, JP : IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
mine, clean, vehicle, car, cut, explod, sensor, saw, link, hydraulic

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 3016018 B (Amamiya kiyoshi) 24. December 1999	1. 4. 5. 6
Y	JP 2002-51649 A (Hurukawa Kikaikinzoku Kabusikikaisya) 19. February 2002	1
Y	JP 1999-270997 A (Kabusikikaisya Komachu Seisakusyo) 5. October 1999	4
Y	JP 2001-296100 A (Hurukawa Kikaikinzoku Kabusikikaisya) 26. October 2001	5
Y	US 5,988,037 A (Kjell Jann Haugom) 23. November 1999	6

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

31 JANUARY 2005 (31.01.2005)

Date of mailing of the international search report

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Name and mailing address of the ISA/KR



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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

PCT/KR2004/002651

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 3016018 B	24-12-1999	NONE	
JP 2002-51649 A	19-02-2002	NONE	
JP 11-270997 A	05-10-1999	NONE	
JP 2001-296100 A	26-10-2001	NONE	
US 5,988,037 A	23-11-1999	AU 1963895 A1 DE 69519923 C0 DE 69519923 T2 EP 749562 B1 EP 749562 A1 WO 9524604 A1	25-09-1995 22-02-2001 13-06-2001 17-01-2001 27-12-1996 14-09-1995